

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in the application:

1-21. (Cancelled)

22. (Currently Amended) A cartridge for preparing a liquid solution for a medical procedure and arranged to contain a particulate material, wherein the cartridge includes:

an inner space for housing the particulate material;  
an inlet arranged to permit the introduction of a liquid into the inner space;  
an outlet arranged to permit the discharge of liquid from the inner space; and  
a device comprising a hollow body defined by a wall enclosing a cavity of the body, the body having a first end and a second end, and being provided with a least one slit-shaped opening extending through the wall, said first end being mounted to the cartridge at the inlet in such a manner that the body extends into the inner space and said second end is located in the inner space of the cartridge, said first end being open and adapted for receiving said liquid to be introduced into the cartridge, which liquid leaves the device through said at least one slit-shaped opening in a flow direction-(b), wherein said at least one slit-shaped opening has a first extension and a second extension being substantially perpendicular to the flow direction (b) and to the first extension, wherein the second extension is significantly shorter than the first extension and significantly shorter than a length of said at least one slit-shaped opening in the flow direction.

23. (Cancelled)

24. (Currently Amended) A cartridge according to claim 22 or 23, wherein the cartridge includes a filter arranged at the outlet and to permit passage of the liquid through the filter, but to prevent passage of the particulate material through the filter, wherein the filter permits the liquid to pass through the filter in a filter direction (a).

25. (Currently Amended) A cartridge according to claim 24, wherein the filter includes at least one slit-shaped opening, which has a first extension and a second extension being substantially perpendicular to the filter direction (a) and to the first extension, wherein the second extension is significantly shorter than the first extension.

26-29. (Cancelled)

30. (Withdrawn) A system for preparing a liquid solution for a medical procedure, the system including:

a cartridge containing a particulate material in an inner space thereof and including an inlet and an outlet;

a first liquid conduit having a first end communicating with a source of liquid to withdraw the liquid into the first liquid conduit and a second end;

a second liquid conduit having a first end communicating with a source of liquid and a second end communicating with the inlet of the cartridge for introducing the liquid into the inner space to produce a concentrate liquid solution containing at least a part of the particulate material dissolved in the liquid;

a third liquid conduit communicating with the outlet of the cartridge and with a mixing point in the first liquid conduit intermediate said first and second ends for conducting said concentrate liquid solution from the cartridge into said first liquid conduit to be mixed with the liquid being conducted through the first liquid conduit to thereby produce said liquid solution in the first liquid conduit for delivery to said second end of the first liquid conduit; and

a device comprising a hollow body defined by a wall enclosing a cavity of the body, the body having a first end and a second end, and being provided with a least one slit-shaped opening extending through the wall, said first end being mounted to the cartridge at the inlet in such a manner that the body extends into the inner space and said second end is located in the inner space of the cartridge, said first end being open and adapted for receiving said liquid to be introduced into the cartridge, which liquid leaves the device through said slit-shaped opening in a flow direction (b), wherein said slit-shaped opening has a first extension and a second extension being substantially perpendicular to the flow direction (b) and to the first extension, wherein the second extension is significantly shorter than the first extension.

31. (Withdrawn) A system according to claim 30, wherein the device comprises:

a hollow body defined by a wall enclosing a cavity of the body, the body having a first end and a second end, and being provided with a least one slit-shaped opening extending through the wall, said first end being open and adapted for receiving liquid to be introduced into the cartridge, which liquid leaves the device through said slit-shaped

opening in a flow direction (b), wherein said slit-shaped opening has a first extension and a second extension being substantially perpendicular to the flow direction (b) and to the first extension, wherein the second extension is significantly shorter than the first extension, said hollow body having a centre axis (x) and an elongated, tubular shape along the centre axis.

32. (Withdrawn) A system according to claim 30 or 31, wherein the cartridge includes filter arranged at the outlet (22) and to permit passage of the liquid through the filter. but to prevent passage of the particulate material through the filter, wherein the filter permits the liquid to pass through the filter in a filter direction (a).

33. (Withdrawn) A system according to claim 32, wherein the filter includes at least one slit-shaped opening, which has a first extension and a second extension being substantially perpendicular to the filter direction (a) and to the first extension, wherein the second extension is significantly shorter than the first extension.

34. (Withdrawn) A system according to claim 30 or 31, wherein the liquid is a dialysis liquid.

35. (Withdrawn) A system according to claim 30 or 31, wherein the particulate material includes bicarbonate and/or sodium chloride.

36. (New) A cartridge according to claim 22, wherein said hollow body has a centre axis and an elongated, tubular shape along the centre axis.

37. (New) A cartridge according to claim 36, wherein said hollow body is tapering along the centre axis towards the second end.

38. (New) A cartridge according to claim 22, wherein said hollow body at the first end has engaging means configured to connect the device to the cartridge.

39. (New) A cartridge according to claim 22, wherein the first extension is substantially perpendicular to the flow direction.

40. (New) A cartridge according to claim 22, wherein the second extension is equal to or less than 0.1 mm.

41. (New) A cartridge according to claim 22, wherein the second extension is equal to or less than 0.08 mm.

42. (New) A cartridge according to claim 22, wherein the second extension is equal to or more than 0.02 mm.

43. (New) A cartridge according to claim 22, wherein the second extension is equal to or more than 0.04 mm.

44. (New) A cartridge according to claim 22, wherein the second extension is approximately 0.06 mm.

45. (New) A cartridge according to claim 22, wherein the at least one slit shaped opening is a plurality of slit-shaped openings, which extend through the wall.

46. (New) A cartridge according to claim 45, wherein the plurality of said slit-shaped openings are distributed around the wall.

47. (New) A cartridge according to claim 36, wherein said hollow body has a wall portion at least in the proximity of the second end, and wherein said at least one slit-shaped opening-extends through said wall portion.

48. (New) A cartridge according to claim 47, wherein said wall portion has a tip-like shape.

49. (New) A cartridge according to claim 48, wherein said wall portion is substantially conical.

50. (New) A cartridge according to claim 47, wherein said wall portion is substantially planar.

51. (New) A cartridge according to claim 50, wherein a normal direction of said wall portion forms an angle of inclination to the centre axis.

52. (New) A cartridge according to claim 36, wherein the flow direction forms an angle to the centre axis.

53. (New) A cartridge according to claim 50, wherein the centre axis extends substantially in parallel with a normal direction of the planar wall portion.

54. (New) A cartridge according to claim 22, wherein the at least one slit-shaped opening has an upstream end and a downstream end with respect to the flow direction, wherein the second extension of the at least one slit-shaped opening increases in the flow direction from a minimum value at the upstream end of the at least one slit-shaped opening to a maximum value at the downstream end of the opening.